

degrees, and in time, to affect the whole Slope of the Land: And as the inferior *Strata* yield Coal and Iron-Ore, their Fermentation may produce this Vapour, and force it to ascend with Violence through the Chinks of the Earth, and give the Water the great Motion it has. This might be obstructed in one Place by the foremention'd subsiding of the sloping Bank, and might afterwards find a Vent in another; in like manner as it happen'd at *Scarborough Spaw*, a few Years since.

If these Hints should be any Amusement to you, or be the Means of setting any more able Person upon further Inquiries, and giving a better Account of them, I have all that is intended by

Jan. 18. 1746.

Your humble Servant,

Cha. Mason.

VII. *Part of a Letter from Mr. John Brown-ing, of Bristol, to Mr. Henry Baker, F.R.S. dated Dec. 11. 1746. concerning the Effect of Electricity on Vegetables.*

*Read Jan. 22.
1746-7.*

Having an Operator at *Bristol* with a good electrifying Machine, I was desirous to electrise a Tree, and therefore sent him the following for that Purpose; *viz. Laurustinus*, *Lencoicum majus flore pleno ferrugineo*, and *Stachys citrina Cretica*. These were not chosen with any Design;

Design; their being the least Plants I had, was the only Reason.

I promised myself the Pleasure of seeing their Leaves erected when electrised, but was disappointed (whether its being the dormant Season of the Year for all Plants might not be some Hindrance, I cannot determine); neither did the Leaves flag on their being touched. However, I was agreeably compensated, by a Stream of fine purple blue coloured Light, much resembling an Amethyst, that issued from the Extremity of each Leaf upwards, of an Inch in Length, when the Finger, or any other Non-electric, approached near it. This Colour I attribute to the watry Particles in the Earth, having often observed the very same Colour issuing from the long Leg of a Syphon. On putting my Finger on the Gun-barrel to stop the Electricity, the Leaves of each Tree had a trembling Motion, which remained for some little Time, and immediately ceased on withdrawing my Finger from the Barrel, and admitting the Electricity. This constantly happened, as I put my Finger on or off the Barrel.

The *Stæchas* Plant has a very long hoary Leaf, and bears its Blossom on a very small, slender, and almost naked Stem, rising near a Foot above the Body of the Plant. This Stem had a Motion given it, when any Non-electric was brought within about two Inches of its Summit, much like the Vibration of the *Pendulum* of a Clock; which vibrating Motion was parallel with the Breech of the Gun, quite contrary to the same kind of Motion I had before observed in a Needle, hanging perpendicularly by a Thread at the End of the Gun; the Needle always
vibrating

vibrating in the Direction of the Gun. The Motion of the Plant and Needle always continued as long as the glass Globe was excited.

I was also desirous to be satisfied, whether Electricity could be propagated without mutual Contact, by suspending another Gun in Silk Cords, about two Inches from Contact, and the Electricity was near as strong in the second Gun as in the first. At the Distance of between 3 and 4 Inches it was much abated, and so it gradually diminished, as the Distance increased to near 6 Inches, where it would scarce attract a Thread of Thread.

I prevailed on a Man to be let Blood, and then placed him on a Cake of Pitch, but could not be sensible of any Increase of Velocity in his Blood, by being electrized, as has been asserted.

I had almost forgot to mention, that the Strokes I received from the electrified Garden-Pots were more violent and painful to my Fingers than from any other Body I ever experienced.

Mr. *Baker*, since his receiving the above Account, has had an Opportunity of electrifying a Myrtle-tree, of between 2 or 3 Feet in Height, growing in a Pot, at the Seat of the Duke of *Montague* at *Ditton*; in Presence of His Grace, of the President of this *Royal Society*, and several other curious Gentlemen; who found, that whenever the Hand, or other non-electric Body, was brought near the Leaves, Streams of fine purple Fire issued therefrom, together with a considerably cold Air; and that the Leaves would be attracted at some Distance, and move vigorously towards a non-electric Body.